

REMARKS

This application has been carefully reviewed in light of the Office Action dated March 9, 2005. Claims 1, 2, 4, 6 and 11 are pending in the application, of which Claim 1 is independent. Reconsideration and further examination are respectfully requested.

Claims 1 to 4, 6 and 8 to 11 were rejected under 35 U.S.C. § 102(b) over U.S. Published Appln. No. 2002/0051055 (Morizono). Claims 5 and 7 were rejected under 35 U.S.C. § 103(a) over Morizono in view of U.S. Patent No. 6,281,921 (Agano). Reconsideration and withdrawal of these rejections are respectfully requested.

Turning to specific claim language, amended independent Claim 1 is directed to a direct thermal printer which includes a direct thermal print head comprising an array of thermal energy sources radiantly coupled to a thermal print medium without an intervening thermal energy modulator. A thermal print medium drive mechanism holds the thermal print medium in noncontacting proximity to the direct thermal print head. A controller is coupled to the direct thermal print head and the thermal print medium drive mechanism with the output power of the thermal energy sources are individually controllable by the controller.

In contrast, Morizono discloses that a recording head 12 comprises a laser light source 21 for emitting a laser beam, a light modulator 24 for modulating a laser beam, an illumination optical system 23 for irradiating the light modulator 24 with a laser beam emitted from the laser light source 21, an imaging optical system 26 for focusing signal light from the light modulator 24 onto the recording medium 11 for image formation, a photodetector 27 for detecting light, a non-signal light extraction mechanism 25 for extracting and leading non-signal light from the light modulator 24 to the photodetector 27, and a controller 28 for detecting a

malfunction in the light modulator 24 on the basis of output from the photodetector 27. (See Morizono, paragraph 0033 and FIG. 1).

According to Morizono, the recording head is a complex collection of subassemblies including a single laser light source modulated by a light modulator. In the present invention, a direct thermal print head comprises an array of thermal energy sources directly radiantly coupled to a thermal print medium without an intervening thermal energy modulator between the thermal energy sources and the thermal print medium. In addition, the present invention includes a controller capable of controlling the output power of the thermal energy sources individually. As Morizono teaches that the recording head is a complex system supporting a single laser light source, Morizono teaches away from applicant's use of an array of spaced apart thermal energy sources in a thermal print head.

Furthermore, Morizono teaches that a light modulator must be used to modulate the output of the single laser light source. By using an array of spaced apart thermal energy sources individually controllable by a controller, the present invention eliminates the need for an intervening light source modulator altogether.

In the Office Action, Agano is relied upon to illustrate different modulators. As the present invention as claimed in Claim 1 uses thermal energy sources radiantly coupled to the thermal print medium without intervening modulators, Agano fails to cure the deficiencies of Morizono.

As Morizono and Agano, neither alone nor in combination, neither disclose nor suggest at least the feature of a direct thermal print head comprising an array of thermal energy sources directly radiantly coupled to a thermal print medium wherein the output power of the

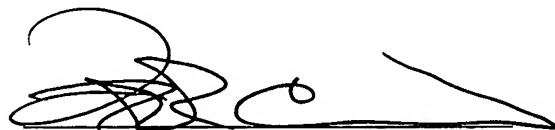
thermal energy sources are individually controllable by a controller, Applicant submits that amended Claim 1 is now in condition for allowance and respectfully request same.

The other pending claims in this application are each dependent from Claim 1 discussed above and are therefore believed patentable for at least the same reasons. However, individual consideration of each dependent claim on its own merits is respectfully requested as each dependent claim is also deemed to define an additional aspect of the invention.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicant's undersigned attorney may be reached in our Costa Mesa, CA office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Frank L. Cire', with a long horizontal line extending to the right.

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